CLAIMS

1. A method for assessing a condition of a performance animal including the steps of:

(a) determining in a sample from a performance animal a relative abundance of a target nucleic acid normalised to a reference nucleic acid and providing the relative abundance of the target nucleic acid as a digital signal;

(b) accessing a remotely located database comprising digital information in relation to relative abundance of the target nucleic acid which corresponds to a particular condition of the performance animal;

(c) correlating the digital signal of step (a) with the digital information of step (b) thereby identifying a particular condition of the performance animal; and

(d) reporting the particular condition of the performance animal.

2. The method of claim 1 whereby the step of determining the relative abundance of the target nucleic acid includes the steps of:

(i) detecting a hybridised complex formed by at least one target nucleic acid and a complementary nucleic acid located on a solid support to provide a digital target sample signal;

(ii) detecting a hybridised complex formed by at least one reference nucleic acid and a complementary nucleic acid located on a solid support to provide a digital reference sample signal; and

(iii) comparing the digital target sample signal of step (i) and the digital reference sample signal of step (ii) to provide a digital signal of relative abundance of the target sample.

3. The method of claim 2 whereby the complementary nucleic acids of step (i) and step (ii) comprise a same or homologous nucleotide sequence.

4. The method of claim 2 whereby the hybridised complex in step (i) is detected by labelling the target nucleic acid.

5. The method of claim 4 whereby the labelled nucleic acid is labelled with Cy3 or Cy5.

6. The method of claim 4 whereby the labelled nucleic acid is cDNA.

7. The method of claim 2 whereby the hybridised complex in step (ii) is detected by labelling the reference nucleic acid.

8. The method of claim 7 whereby the labelled nucleic acid is labelled with Cy3 or Cy5.

9. The method of claim 7 whereby the labelled nucleic acid is cDNA.

10. The method of claim 2 whereby the respective target nucleic acid and reference nucleic acid are concurrently hybridised with respective complementary nucleic acids.

11. The method of claim 2 whereby the target nucleic acid and the reference nucleic acid have a same or homologous nucleotide sequence and are respectively labelled with different labels.

12. The method of claim 2 whereby the solid support is an array.

13. The method of claim 12 whereby the array is a microarray.

14. The method of claim 1 wherein the database is accessible via a communications network.

15. The method of claim 14 wherein the communications network comprises the Internet, an intranet, an extranet or wireless means.

16. The method of claim 1 wherein the performance animal is a mammal.

17. The method of claim 16 wherein the mammal is human, horse, dog or camel.

18. The method of claim 1 wherein the condition enhances, hinders, impedes or does not change an expected ability of the performance animal.

19. The method of claim 18 wherein the condition comprises normal, pre-clinical disease, overt disease, progress and/or stage of disease, undiagnosed or unclassified conditions, presence of drugs, response to drugs, response to exercise, response to vaccines, therapies, nutritional states and response to environmental conditions.

20. The method of claim 19 wherein the disease comprises laminitis, lameness, viral disease, colic, gastritis, gastric ulcers, respiratory ailments and epistaxis.

21. A diagnostic system comprising:

(A) a microarray comprising respective nucleic acids complimentary to a target nucleic acid and reference nucleic acid;

(B) a microarray reader that detects hybridised complexes formed respectively by the target nucleic acid and the reference nucleic acid with their complimentary nucleic acids and generates a digital signal;

(C) a database storing information in relation to relative abundance of the target nucleic acid corresponding to a particular condition of a performance animal;

(D) a diagnostic server that receives the digital signal and correlates the digital signal with information in the database to identify said particular condition and reports said particular condition; and

(E) a means for communicating between the microarray reader and the diagnostic server.

22. The diagnostic system of claim 21 wherein the microarray reader determines relative abundance of the target nucleic acid normalised to the reference nucleic acid and generates a digital signal for the relative abundance of the target nucleic acid.

23. The diagnostic system of claim 21 wherein the means of communication is a network.

24. The diagnostic system of claim 21 further comprising a display means to display the report.